

CLAIMS

- 5 1. An Interprocessor Communication (IPC) network, comprising:
an IPC server;
one or more IPC clients coupled to the IPC server; and
the IPC server includes a port dedication table.
- 10 2. An IPC network as defined in claim 1, wherein the IPC server
includes one or more ports and the port dedication table keeps track of
which of the one or more ports have been dedicated.
- 15 3. An IPC network as defined in claim 2, wherein the one or more IPC
clients also each includes a network routing table that shows what
addresses have been assigned to each of the IPC server's ports.
- 20 4. An IPC network as defined in claim 3, wherein the IPC server or one
of the one or more IPC clients upon receiving a port dedication
message from one of the one or more IPC clients that is a peer IPC
node informs the IPC client sending the port dedication message if it
has a port available for dedication.

5. An IPC network as defined in claim 4, wherein the IPC server or one of the one or more IPC clients that is a peer IPC node also informs the IPC client sending the port dedication message information about the port(s) it has available.
6. An IPC network as defined in claim 2, wherein each of the one or more IPC clients has a port dedication table.
7. An IPC network as defined in claim 6, wherein each of the port dedication tables found in each of the one or more IPC clients includes information about the IPC client's own port(s).
8. An IPC network as defined in claim 1, wherein in the IPC network is found in a radio communication device.

9. A method for dedicating a port in an IPC network having an IPC server and an IPC client each having a port dedication table, comprising the steps of:

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(a) transmitting a port dedication message from the IPC client to the IPC server;

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(b) sending an information message back to the IPC client from the IPC server informing the IPC client of which ports the IPC server has available;

(c) transmitting a message from the IPC client to the IPC server selecting which port it wants to have dedicated; and

(d) sending a message from the IPC server to the IPC client informing the client that the requested port has been dedicated for its use.

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10. A method as defined in claim 9, wherein in response to step (d) the IPC client updates its port dedication table.

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11. A method as defined in claim 9, comprising the further step of:

(e) sending a message from the IPC server terminating the dedicated port.

12. A method as defined in claim 9, comprising the further step of:

(e) sending a message from the IPC client requesting that the dedicated port be released.

5 13. A method as defined in claim 10, wherein the IPC server also updates its port dedication table after step (d).

14. A method as defined in claim 9, wherein if after a predetermined period of time a port has not been located that can be dedicated, the
10 port dedication is aborted.

15. A method as defined in claim 9, wherein once the port is dedicated in step (d) data transmitted on the dedicated port is guaranteed a predetermined Quality of Service (QoS) regardless of the total data
15 load of other channels on each of the links along the desired data path.

16. A method as defined in claim 9, wherein the IPC network comprises an IPC network which is part of a radio communication device.

17. A method for dedicating a port in an IPC network having an IPC server and one or more IPC clients each having a router and device layer, one of the one or more IPC clients requesting a dedication of a communication path, comprising the steps of:
- 5 a) transmitting a router channel request from a router layer to a device layer in the IPC client requesting the dedication of the communication path; and
- b) transmitting a peer to peer request from the router layer of the
- 10 IPC client requesting the communication path dedication to the router layer of the next IPC client or the IPC server in the communication path.
18. A method as defined in claim 17, comprising the further step of:
- c) sending a router channel request from the router layer to the
- 15 device layer of the next IPC client or IPC server in the communication path sends a router.
19. A method as defined in claim 18, wherein if the router channel request
- 20 in step (c) is not replied to in a predetermined period of time, a message is sent to the router of the IPC client requesting the dedication of the communication path to terminate.

20. A method as defined in claim 19, wherein the communication path is terminated by the IPC client requesting the dedication of the communication path releasing each channel that was previously reserved up to the point of the timeout in step (c).